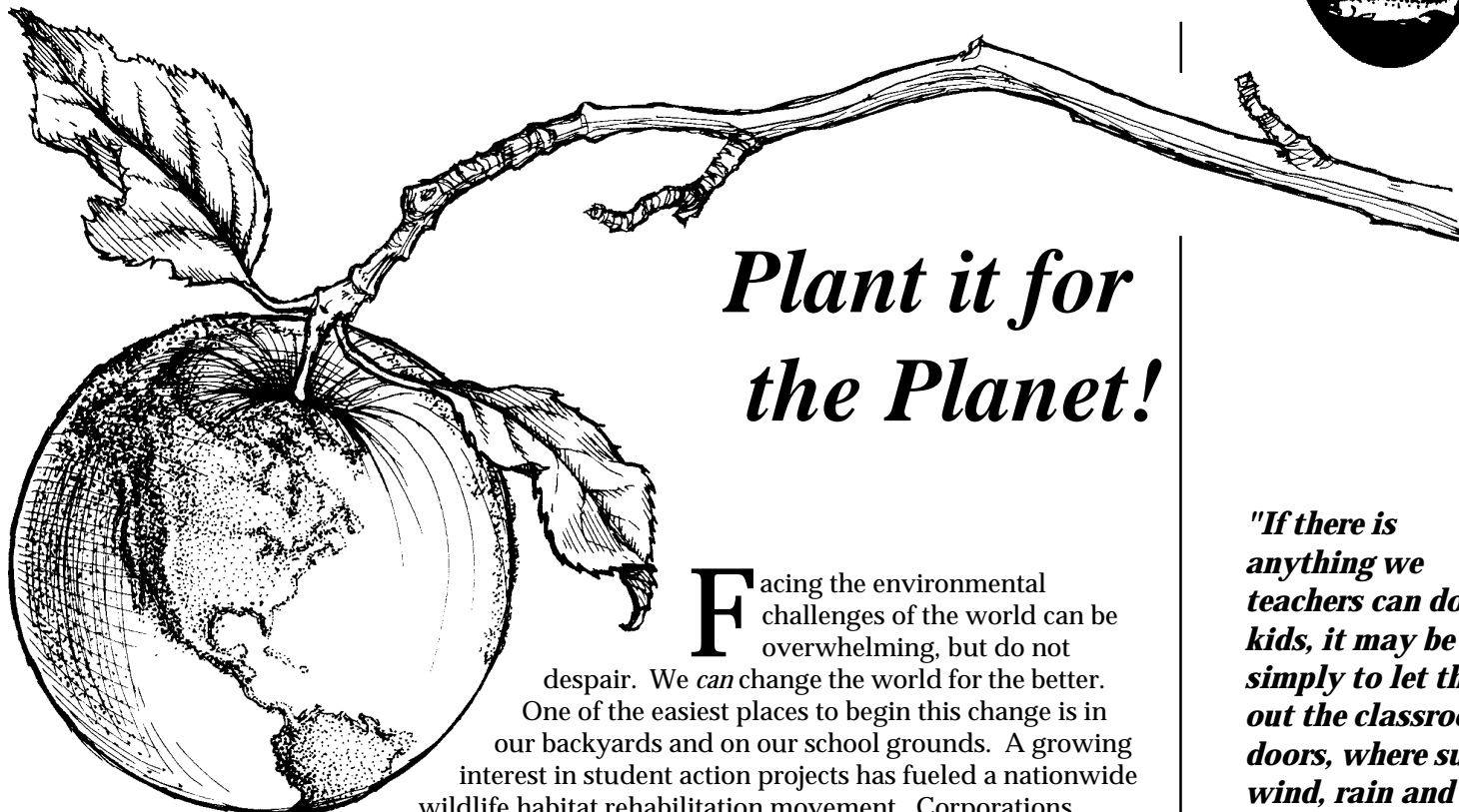


Growing WILD

Fall 1994

Utah's Project WILD Newsletter



Plant it for the Planet!

Facing the environmental challenges of the world can be overwhelming, but do not despair. We *can* change the world for the better. One of the easiest places to begin this change is in our backyards and on our school grounds. A growing interest in student action projects has fueled a nationwide wildlife habitat rehabilitation movement. Corporations, government agencies and schools are teaming up to turn school grounds into nature study areas. The benefits are many:

- *Students gain greater understanding of nature through hands-on experience.*
- *Students grow in their ability to solve problems.*
- *Students achieve a greater sense of self-efficacy.*
- *Schools and communities realize the value of shared goals.*
- *Wildlife profits through habitat enhancement.*

So don't surrender to melancholy and despair. Grab your shovels, hammers and water cans and get outdoors with your students. You *can* make a difference.

This issue of *Growing WILD* promotes student action projects that focus on habitat enhancement. We offer educational resources, grants and expertise to get you started. Also in this issue, we look at the concept of biomes. The new elementary science core curriculum asks fourth-grade teachers to teach biomes. We put together a map and list of animals in Utah's biome with some activity suggestions.

We have included an issue of *Nature's Call* focusing on backyard bird feeding. If you would like a class set of *Nature's Call*, we can send them to you. Finally, we are offering several free resources, such as the *WILD About Elk* guide, the *Kokanee Salmon Notebook Series* and *Feeding Utah's Birds*. Be sure to call or write for your copies.

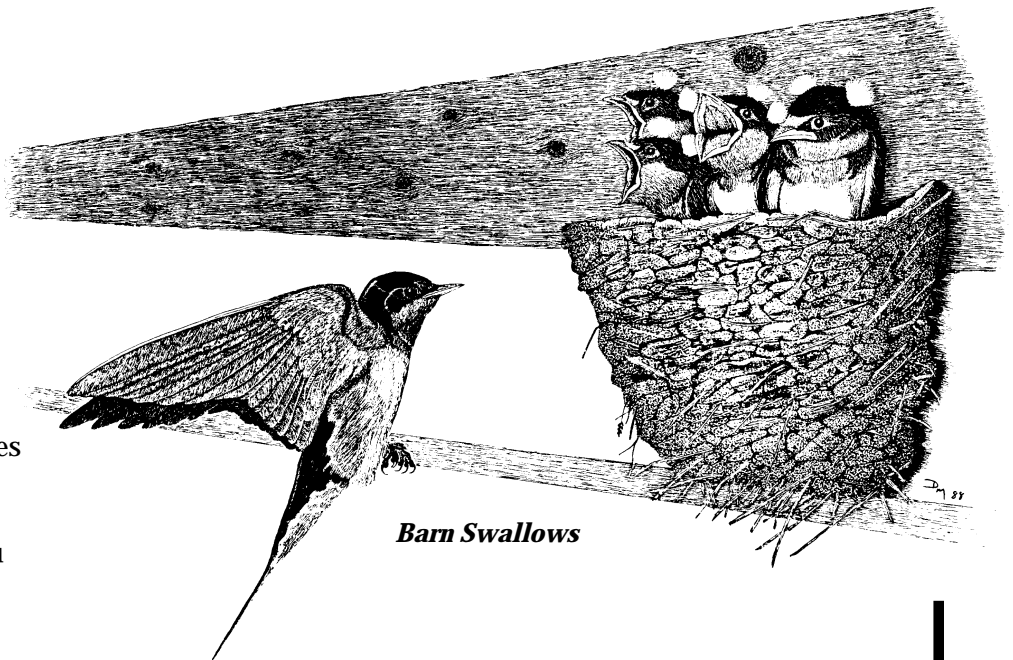
"If there is anything we teachers can do for kids, it may be simply to let them out the classroom doors, where sun, wind, rain and the good earth allow their imaginations to roam and take root, to trust their better instincts and let them grow as naturally as our gardens."

**Kayo Robertson,
Millville
Elementary
teacher**

Resources

Treat your students to a WILD Site!

There are many opportunities to create a WILD site on your school grounds. Projects can be as simple as building a bird feeder or reseeding winter range for big game. Project WILD can assist you and your students in your efforts. The resources listed below might be helpful. Please call or write Project WILD if you want to reserve these materials for check-out.



Barn Swallows

- **WILD School Site**--A guide to habitat improvement projects on school grounds. This guide produced by Project WILD provides background information, educational theory and practical suggestions.
- **A Wildlife Conservation Manual for Urbanizing Areas in Utah**--Don't let the title scare you! A comprehensive guide to enhancing Utah's wildlife habitat. Produced by Utah State University's Department of Landscape Architecture and Environmental Planning.
- **Homes for Wildlife**--This planning guide for habitat enhancement on school grounds comes complete with plans, tips and Project WILD activities.
- **The Schoolyard Wildlife Activity Guide**--Simply the best activity guide for the outdoor classroom.
- **Woodworking for Wildlife: Homes for Birds and Mammals**--Perfect for students who want to build and monitor wildlife shelter. Complete with plans for 27 different homes.
- **Pond Design Guide for Schools**--A concise and practical guide to pond construction on school grounds.
- **Guidelines and Features for Outdoor Classrooms**--The best feature of this guide is the correlation of Project WILD and Project Learning Tree to outdoor classrooms.
- **A Guide to NatureScaping in the Development of Outdoor Classrooms**--A locally produced guide with Utah specific suggestions.

Action

School Yard Naturescaping Grants

**Apply now for a \$300 student action grant
from Project WILD for the 1994-1995 school year!**

What is a Naturescaping Grant?

An action project designed by students to establish wildlife habitat on or nearby your school grounds.

Why focus on habitat?

Providing habitat for diverse populations of wildlife is of increasing importance. Naturescaping projects allow students to take positive actions which result in long-term benefits for wildlife.

How large a project does it have to be?

It can be as simple as planting native plants for birds and butterflies or as extensive as revegetating winter range for big game animals. Many schools use the Naturescaping Grant as "seed" money and solicit additional funding from community and school sources.

What should the emphasis be?

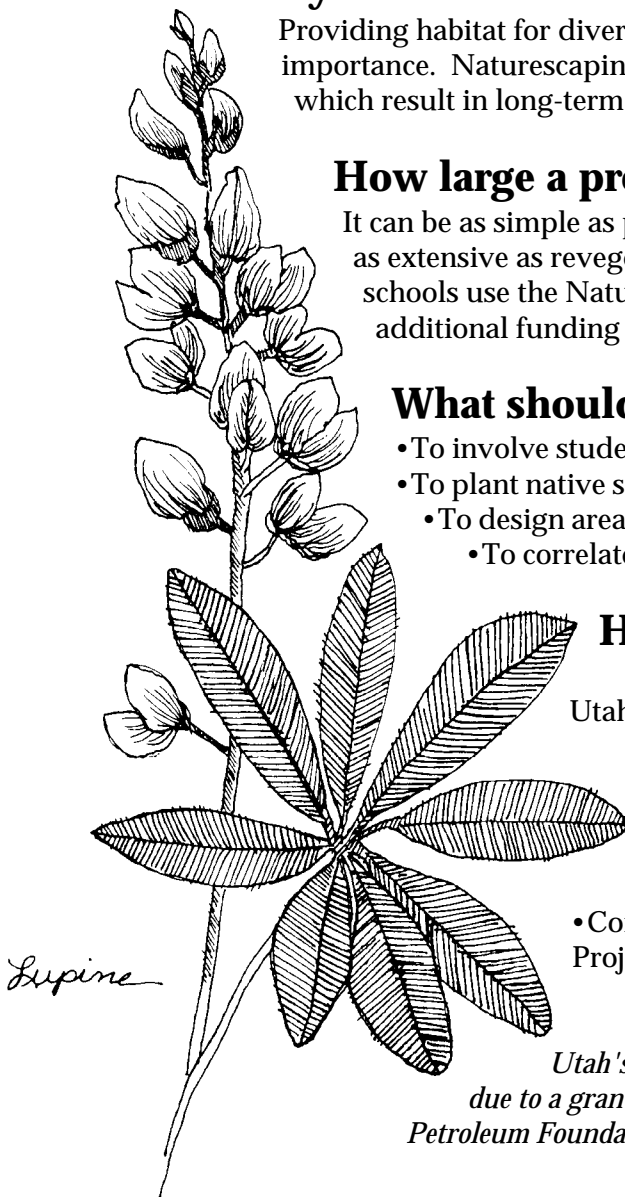
- To involve students in project planning and implementation
- To plant native species
- To design areas for interdisciplinary studies
- To correlate the project to state core curricula

Here's how to apply:

- Request an application from Project WILD, Utah Division of Wildlife Resources, 1596 West North Temple, Salt Lake City, UT 84116. You will also receive the booklet *Creating Landscapes for Wildlife* (a guide to Utah's vegetative zones and native plants).

- Complete the application form and return it to the Project WILD office by **November 7, 1994**.

Utah's Project WILD is able to fund Naturescaping projects due to a grant from the National Project WILD Program, Phillips Petroleum Foundation and National Fish and Wildlife Foundation.



A WILD Door to the New Core!

As you probably know there is a new elementary science core curriculum. This core now covers biomes and ecosystems. Teachers have been calling our office asking for information and materials to teach these new concepts. There is some confusion about the concept of biomes. Part of that confusion is the result of how the standards and objectives are written in the new core.

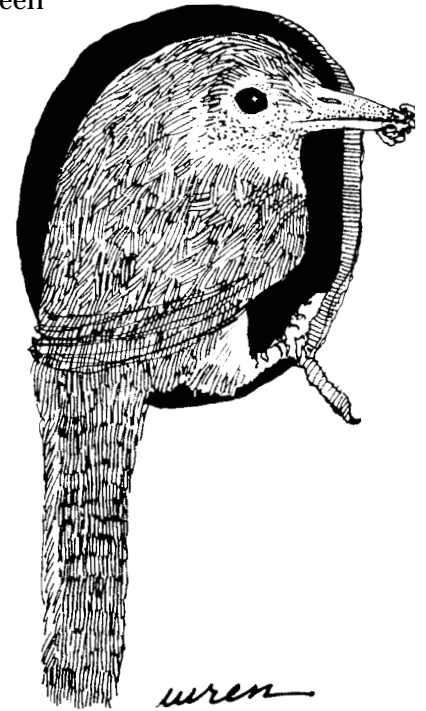
In discussing biomes with wildlife biologists, they reminded us that a **biome is a worldwide classification which is very broad and includes the interactions of plants, animals, climate and geology to produce a general type of community.** This definition is often confused with the concept of an ecosystem which is more specific and geographically smaller than a biome and includes the physical exchange of matter and energy. Some examples of Utah ecosystems are: Great Basin desert, Mojave desert, Colorado Plateau steppe, montane, and sage steppe

When we began researching biomes, we found several different classification systems, some of them complex, some very simple. However, they all had one thing in common: aquatic systems were not listed as biomes. Some classification systems included a category called semi-desert grasslands, while others did not. In order to avoid confusion we chose to use the system developed by the Utah State Office of Education in the *Teacher Resource Book*. They chose to list seven different biomes: tropical rain forests, savannahs, deserts, grasslands, temperate deciduous forests, taiga and tundra. Although Utah generally exists within the desert biome, it contains mountains which rise up capturing more rainfall, thus defying this simple classification. **Mountains are classified as complex areas with such a variety of plant and animal communities that they are not considered one biome.**

We have dedicate the next two pages of *Growing WILD* to biomes. Page 5 discusses and lists plants and animals in Utah's biome. Page 6 is a map of Utah created by the Utah Division of Wildlife Resources Habitat Section's Global Information System (GIS). GIS is a sophisticated satellite information-gathering system that uses photos taken from space to produce a great variety of maps. Our map is based on vegetation types.

If you are interested in a detailed list of plants and animals found in the deserts of Utah, please contact the Project WILD office and ask for *The List of Mojave and Great Basin Deserts' Plants and Animals*.

If you are teaching about Utah ecosystems or biomes, you will need the publication, Creating Landscapes for Wildlife. This 32-page, Utah-specific booklet covers the plants and animals of Utah by regions and describes the relationships between plants and animals. Call or write Project WILD for your copy.



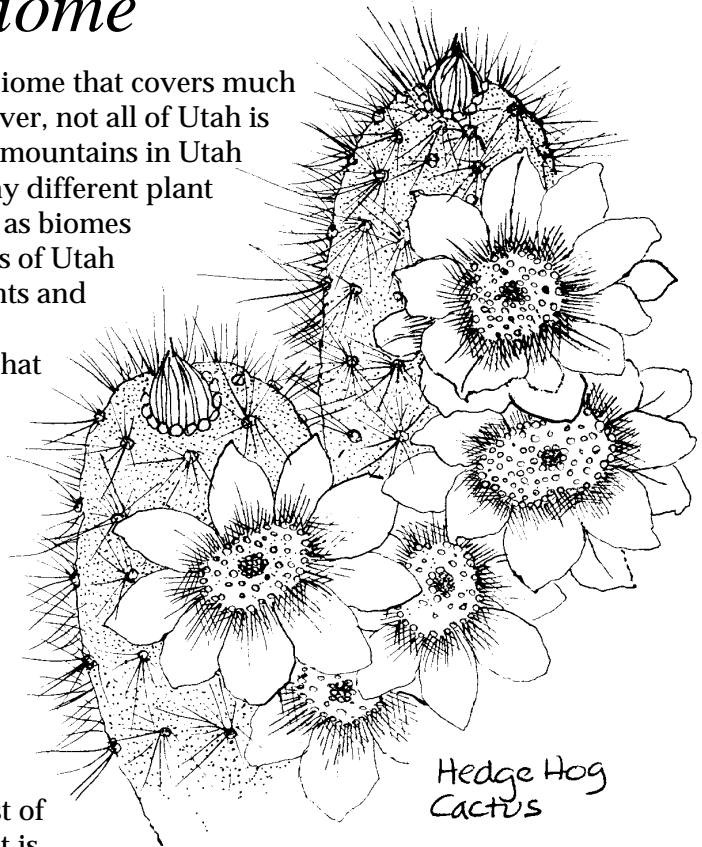
New WILD Correlations

Call or write for the Project WILD correlations to the new science core curriculum.

Beehive Biome

Utah is part of the extensive desert biome that covers much of the western United States; however, not all of Utah is desert. Travel up one of the many mountains in Utah and you will see several life zones and many different plant communities. Mountains are not classified as biomes because of their complexity. The mountains of Utah provide a unique opportunity to study plants and animals that make up other biomes of the world. For example, the spruce-fir forests that ring the upper elevations of Utah's mountains resemble the taiga or northern coniferous forest that stretches throughout Canada and much of the former Soviet Union.

We have included a list of plants and animals found in the desert biome in Utah. In some cases an animal or plant might not be found everywhere in the biome. For example, in Utah the desert tortoise lives only in the Mojave Desert, but not all of Utah's desert biome is Mojave Desert. Most of Utah's desert is Great Basin Desert, where it is too cold for desert tortoises. We have also listed plants and animals of Utah's mountains.



Plants and Animals of the Desert Biome in Utah

Plants

Big Sage Brush
Blackbrush
Four-wing Saltbush
Greasewood
Rabbitbrush
Creosote Bush
Mormon Tea
Joshua-tree
Pricklypear Cactus
Sego Lily
Desert Trumpet
Shadescale
Winter Fat
Claret Cup Cactus
Tamarisk
Turpentine Broom

Animals

Mormon Cricket
Yucca Moth
Spadefoot Toad
Speckled Dace
Virgin River Chub
Gopher Snake
Desert Tortoise
Zebra-tail Lizard
Burrowing Owl
Horned Lark
American Kestrel
Badger
Kit Fox
Sagebrush Vole
Kangaroo Rat
Spotted Bat

Plants and Animals of the Mountains in Utah

Plants

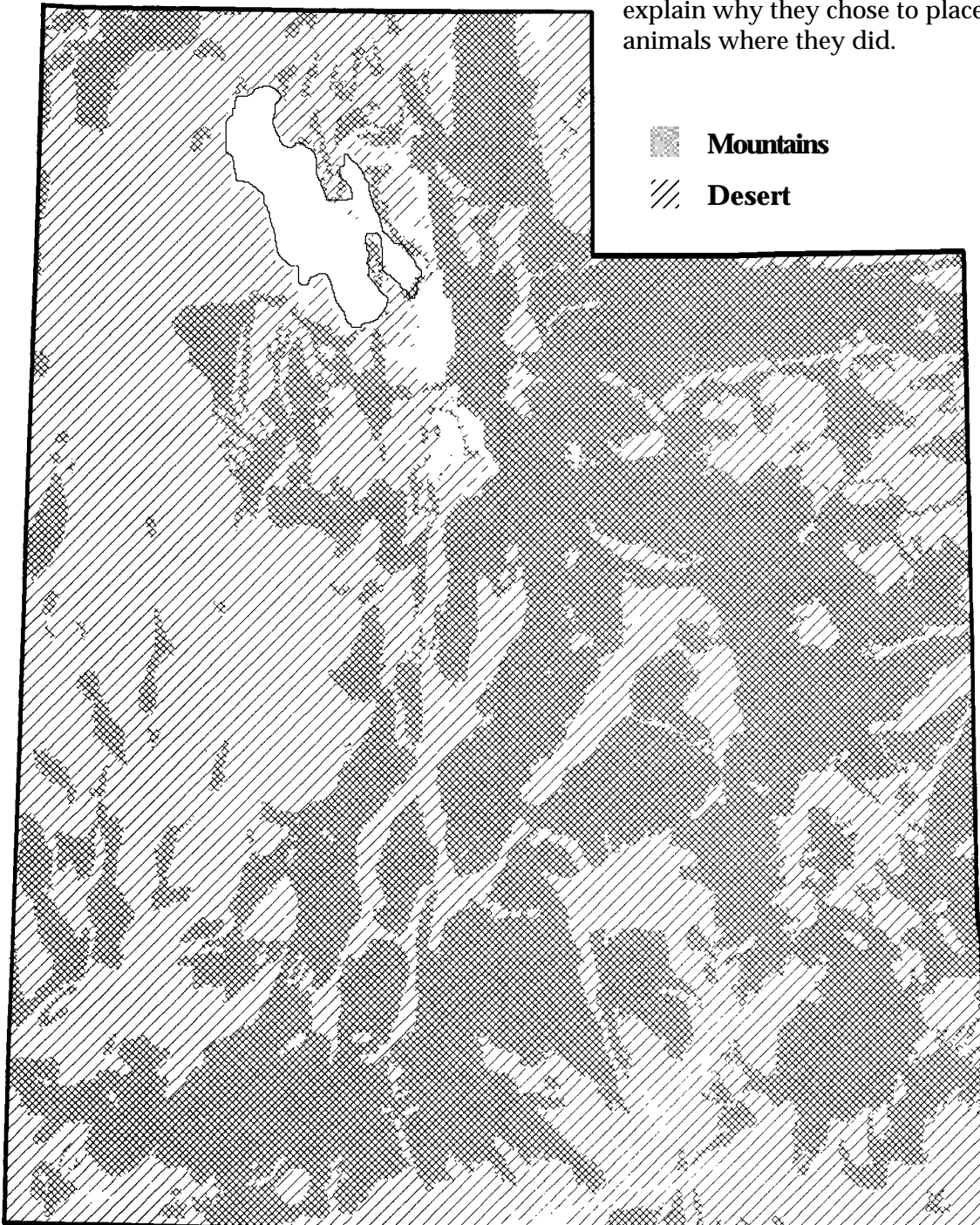
Blue Spruce
Englemann Spruce
Ponderosa Pine
Aspen
Douglas Fir
Pinyon Pine
Lodgepole Pine
Limber Pine
Utah Juniper
Chokecherry
Willows
Serviceberry
Sedges
Lupines
Elephant Head
Yarrow

Animals

Carrion Beetle
Western Rattlesnake
Smooth Green Snake
Short Horned Lizard
Western Skink
Tiger Salamander
Cutthroat Trout
Northern Goshawk
Mountain Chickadee
Gray Jay
Clark's Nutcracker
Deer Mouse
Black Bear
Mule Deer
Elk
Short-tailed Weasel

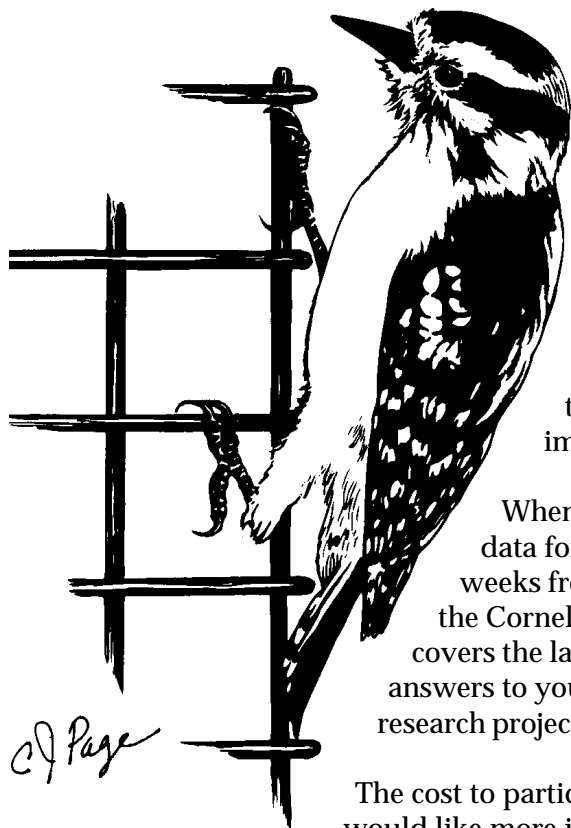
You can use the 16 color photographs in the Utah Wildlife Photoseries to teach about wildlife in Utah. Available for \$5.00 from Project WILD. Call 538-4719 to get your set.

After doing the Project WILD activity "Adaptation Artistry," discuss with your class the adaptations of desert and mountain animals. Divide the class into small groups. Enlarge the biome map and give a copy to each group of students. Cut out and laminate color photos of Utah animals, enough for each group to have several different animals from the list on page 5. Ask each group to study the pictures and make observations about the animals' adaptations. Then have the students thumbtack the animals on the map in places where they think the animals live. Have each group explain why they chose to place the animals where they did.



Collect Data For Science --

Project Feeder Watch Needs You!



Downy Woodpecker

Thousands of people across the United States and Canada who like to feed birds have turned their hobby into valuable research for bird science. Project FeederWatch is an ongoing survey of winter bird feeders. FeederWatchers make important contributions to the knowledge about and the conservation of North American birds. By comparing species counts from year to year scientists can monitor bird populations. This is an opportunity to teach the scientific process and at the same time take important actions for wild animals.

When you enroll in Project FeederWatch, you receive the data forms that you fill out and send in once every two weeks from November through March. You will also receive the Cornell Lab of Ornithology newsletter, *Birdscope*, which covers the latest FeederWatch results, articles on bird behavior, answers to your bird questions and information regarding other bird research projects.

The cost to participate is \$14. If you want to get your class involved or would like more information write:

Project FeederWatch, Dept. PFW
Cornell Lab of Ornithology
159 Sapsucker Woods Road
Ithaca, NY 14850-1999
(607) 254-BIRD

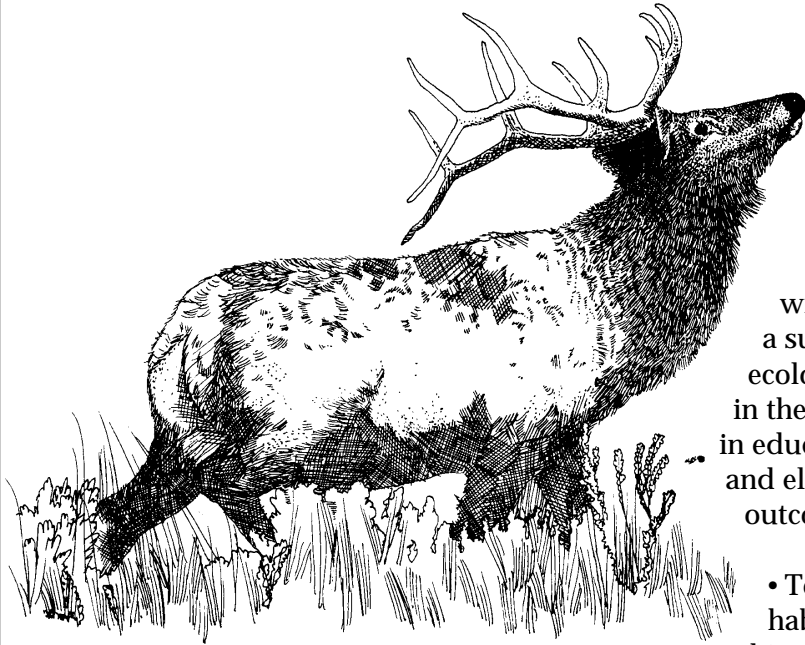
Feeding Utah's Birds

Find out what and how to feed Utah's birds. *Feeding Utah's Birds* can get you and your class started in the fascinating and rewarding world of bird feeding. Discover feeding times and food preferences. Examine the relationship between feeding activity and weather conditions. Study interactions between different species. Call the Project WILD office to get your copy.

Resource

WILD About Elk

An Educator's Guide



Call today for your free copy of *WILD About Elk*.

This 80-page guide is written for educators and provides a summary of the biology and ecology of elk. The activities included in the back of the guide will assist you in educating your students about elk and elk habitat. Some of the learner outcomes identified in the guide are:

- To recognize and describe elk habitat, including loss of historical range and status of current range
- To describe relationships of elk, habitat and other species sharing the same ecosystem
- To understand and describe elk behavior including life cycles, social structure, predator/prey relationships and migratory patterns
- To identify, investigate and analyze issues affecting elk habitat
- To evaluate the learner's own behavior and select appropriate actions to benefit elk and elk habitat



New Video!

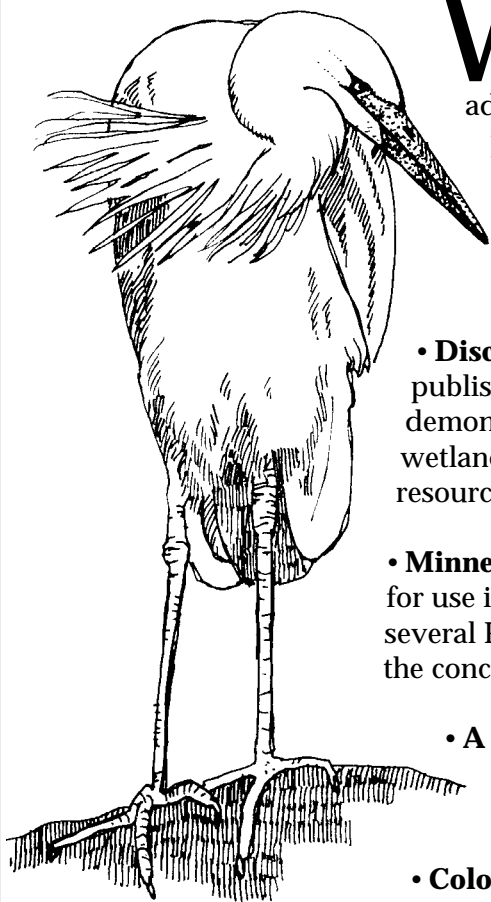
Check-out the new *WILD About Elk* video. This 13-minute video examines elk behavior, limiting factors and the status of elk in the United States. Amazing footage captures elk bugling, defending territory and raising young. The video is appropriate for upper elementary through secondary. Call the Project WILD office at 538-4719 to check-out a copy.

The elk guide is the result of a partnership between the Western Regional Environmental Education Council and the Rocky Mountain Elk Foundation. The guides are distributed nationally through Project WILD.

These guides are offered to Utah educators through Project WILD for \$3.

Resource File

Wetlands



American Egret

We are flooded with requests for information and activities on wetlands. We have selected some resources to supplement your unit on wetlands. In addition to printed materials, we found some superb video programs that support the resource materials. All of these materials are available for check-out. Due to the strong interest in wetlands, you might want to call us soon to reserve the materials. The following is a partial list of materials:

- **Discover Wetlands**--The 177-page, supplementary curriculum published by the Washington State Office of Ecology demonstrates through activities the function and values of wetlands. This 4-9 activity guide contains a comprehensive resource guide.
- **Minnesota's Ag-Stravaganz's Wetland Unit**--Although developed for use in Minnesota classrooms, this K-6 and 7-9 curriculum uses several Project WILD activities, as well as, other activities to deliver the concepts of wetlands.
- **A World in Our Backyard**--Try one of the many activities in this wetlands education and stewardship curriculum. Perfect for the fourth-grade core on ecosystems.
- **Color Our Wetlands**--This coloring book was created by the students of Treasure Mountain Middle School in Park City. Good for assessment and ideas to develop peer education materials.
- **Wetlands: The Audubon Society Nature Guides**--A comprehensive field guide, fully-illustrated with color photographs, to the wildflowers, birds, reptiles, insects and other natural wonders of North America's wetlands.
- **EPA and US Fish and Wildlife Service Fact Sheets**--Look at suggested management techniques and Clean Water Act compliance guidelines.
- **Fabulous Wetlands**--Bill Nye, "The Science Guy," is the host of this entertaining and informative video. A copy is included in the file.
- **Other Videos**--*Conserving America: The Wetlands, Wealth of Wetlands* and *Do Your Part*. Check-out these videos separately.

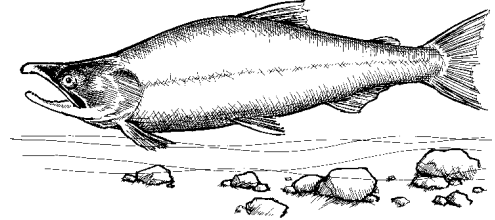
Did you know?

- * Over one-half of the wetlands that once existed in the continental United States have been destroyed?
- * Losses of wetlands continue at an estimated rate of 300,000 to 500,000 acres per year.

Resources

For **FREE** copies of the resources described on this page, contact the Project WILD office, 1596 West North Temple, Salt Lake City, UT 84116 (538-4719).

New **Wildlife Notebook Series** on kokanee salmon is now available. Continue your studies of the fascinating salmon. The only salmon in Utah's waters has many of the adaptations of anadromous salmon.



The Idaho chinook salmon was recently listed as an endangered species. Call for a copy of this **poster** that depicts the life cycle of this remarkable animal. Good visual aid for "Hooks and Ladders."

Get a **1994 Field Checklist of the Birds of Utah**. A pocket-sized guide that is invaluable to the birder in Utah.

Here is your chance to get a copy of the **Project WILD Cougar Poster**. Seen at all of our workshops, this poster says, "Earth is home to us all." Limited supply.

Ten Fun Ways to Go Wild About Biodiversity is a concise action guide that addresses the issue of biodiversity. Produced by the World Wildlife Fund for an elementary audience.

Check out from Project WILD

The Microcosmos Curriculum Guide to Exploring Microbial Space--This 380-page activity guide is perfect for the sixth-grade science core. There are other applications at other grade levels.

Project BUGS is a K-6 activity guide that can capture and direct children's natural curiosity about insects.

Contest

Third Annual Science Writing Awards--High School/Middle/Elementary School categories where winners receive cash prizes. Topics can include: Health and Medicine, Environment and Biosphere, Life Sciences, Physical Sciences and Technologies. For an application, write Mary McDonald at CISE, 2480 MEB, University of Utah, SLC, Utah 84112.

Correction

In the Spring Issue of *Growing WILD* we made a mistake. The driest state in the U.S. is Nevada, not Arizona.

NOTICE

Project WILD is **MOVING!!**

In November, the Division of Wildlife Resources is moving to the old Department of Motor Vehicles Building located at the east entrance of the State Fairgrounds. We will have the same phone numbers and mailing address, but if you come in to pick up materials during November, please call to confirm our location.

Resources

Available for Check-Out from Project WILD

Video Tapes

Title	Length
A Home for Pearl	70 minutes
All American Bear (black bears)	60 minutes
Anima Mundi	30 minutes
Arctic Refuge: Treasure of the North	30 minutes
A World Alive	25 minutes
Bats of America	15 minutes
Bat: Myth and Reality	16 minutes
Bats, Very Elementary	6 minutes
The Bear River Migratory Bird Refuge	18 minutes
Blackened Feathers - Broken Chain	6 minutes
The Blue Planet	42 minutes
The Bridge	30 minutes
Catch Me If You Can	46 minutes
Climb the High Winds	25 minutes
Conserving America - The Wetlands	60 minutes
Do Your Part (wetlands)	19 minutes
Fabulous Wetlands	8 minutes
Frontline: In Our Children's Food	56 minutes
Greed and Wildlife: Poaching in America	60 minutes
Humpbacks: Gentle Giants of the Pacific	50 minutes
I Need the Earth; The Earth Needs Me	20 minutes
The Last Parable	30 minutes
The Mysterious Black-Footed Ferret	60 minutes
Miracle of the Scarlet Salmon	50 minutes
Owls	15 minutes
Poisoning of America	60 minutes
Rain Forest: Profiles of Nature	50 minutes
Rain Forest Rap	6.5 minutes
Sea Turtles: Ancient Nomads	60 minutes
Song Dog (life cycle of a coyote pack)	27 minutes
Super Sense: Seeing Sense	30 minutes
Swimming Upstream: The Endangered Fish of the Colorado River	14 minutes
Trashing the Oceans	7.5 minutes
Voices of the Sound: Exxon Valdez	21 minutes
Washington County's Habitat Planning	20 minutes
Wealth of Wetlands	24 minutes
Whales!	60 minutes
White Wolf	60 minutes
WILD About Elk	13 minutes
Wild Places: Cactus Desert	10 minutes
Yellowstone Fires: The Unfinished Song	20 minutes

Resource Files

(files contain video tapes and current articles and activities)

Alaskan Oil Spill
Bats
Deserts
Endangered Species
North American Bears
Preschool
Rain Forests
Sea Turtles of the World
Wetlands
The Wolf
The Yellowstone Fires of 1988

Activity Kits

Replitracks. Set of 18 different tracks cast in durable rubber vinyl; can be used in identifying animal tracks, making plaster casts or for ink printing.

Water Investigation Kit. Kit contains HACH water test kit and equipment for sampling and identifying aquatic organisms.

Competitive Interaction Kit. Kit contains a complete set of materials for 30 students to carry out the activity which stresses bird beak adaptations and survival. Copies of the activity are available at the Project WILD office.

Endangered Species Kit. Confiscated items from the illegal wildlife trade. Cannot be shipped due to large size.

Slide Tape Programs

Earth Day Every Day: You Can Make a Difference
Forests are More than Trees
Predators! They're Part of the Picture
Water: We Can't Live Without It
We Care About Clean Air
What Bear Goes Where?

Please follow these guidelines:

- Two week check-out limit. Remember that others are waiting to use the materials.
- Call well in advance to reserve the materials.
- If you are shipping materials by mail, allow for transportation time.

project WILD

Utah Division of Wildlife Resources
1594 W. North Temple, Ste. 2110
Salt Lake City, Utah 84116



Growing WILD is written by Bob Ellis, edited by Heather Hales and produced by Utah Project WILD. The cover and kokanee drawings are by Jill Rensel.



STATE OF UTAH
NATURAL RESOURCES
Division of Wildlife Resources

The Utah Department of Natural Resources receives federal aid and prohibits discrimination on the basis of race, color, sex, age, national origin, or handicap. For information or complaints regarding discrimination, contact Executive Director, 1636 West North Temple #316, Salt Lake City, UT 84116-3193 or Office of Equal Opportunity, U.S. Department of the Interior, Washington, D.C. 20240.



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